



# About the project

The documents the project rests on

## 3GPP TR 26.927

### Technical Report

Study on AI and ML in 5G media services: media-based applications and the media service architecture for AI/ML.

## 3GPP TR 26.847

### Technical Report

Evaluation of AI and ML in 5G media services: feasibility evaluations for a given set of services.

## 3GPP TR 26.870

### Technical Report, draft

Study on Media Aspects for 6G System, which records the traffic of AI media services measured with the testbed.

FIND OUT MORE

Technical Analysis

Specifications

# What the reports cover

The SA4 reports on AI and ML in media, and the 6G media study that the traffic measurements feed

**TR 26.927** media-based applications and the architecture for AI/ML

Object recognition in image and video

Video quality enhancement in streaming

Crowd-sourced media capture

Natural language processing on speech

Media service architecture for AI/ML

Split inference

Model delivery

**TR 26.847** the evaluation of the services

Testbed architectures and anchors

Split inferencing

Evaluation metrics

Compressed model transfer, speech recognition

Object detection and labelling

Bit-incremental model transmission

Real-time translation over IMS

Model-data transmission

**TR 26.870, draft** the seven work topics of the 6G media study; only AI traffic characteristics have findings so far

Media Delivery Architecture

6G media

Media aspects related to SA2 topics

Media for ubiquitous access

Trusted and private communication for media

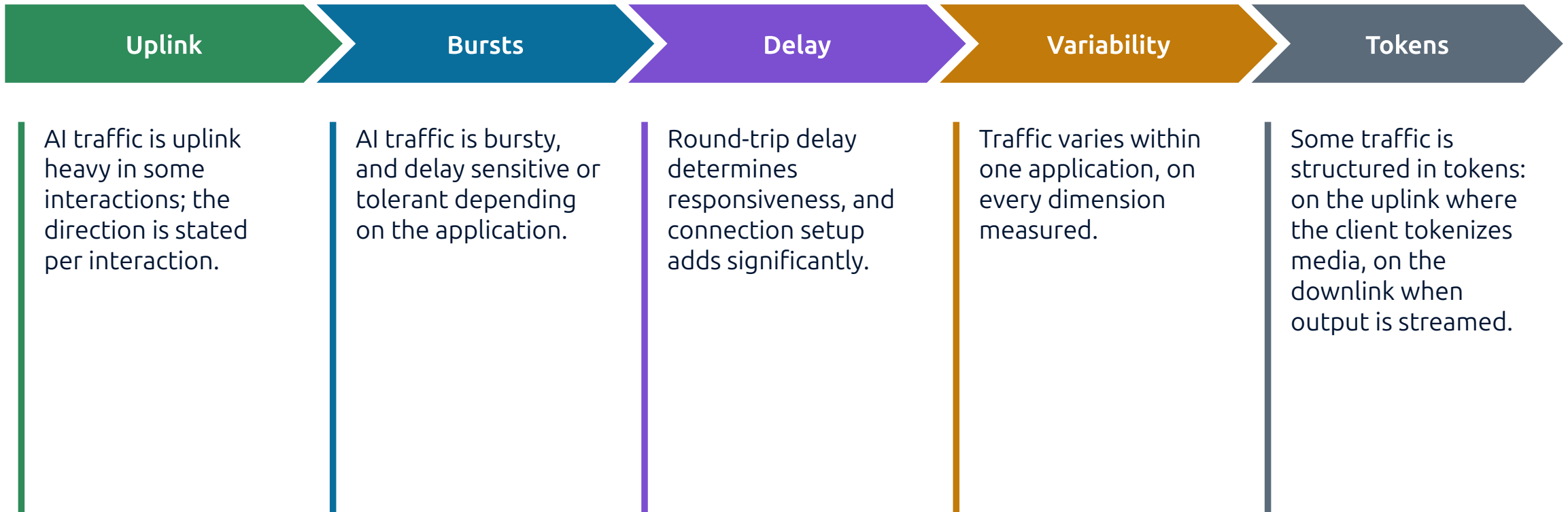
Software and asset management

Real-time communication system enhancements

AI/ML in media is studied in SA4; the network-side analytics of AI/ML (NWDAF) are studied in SA2.

# AI traffic characteristics

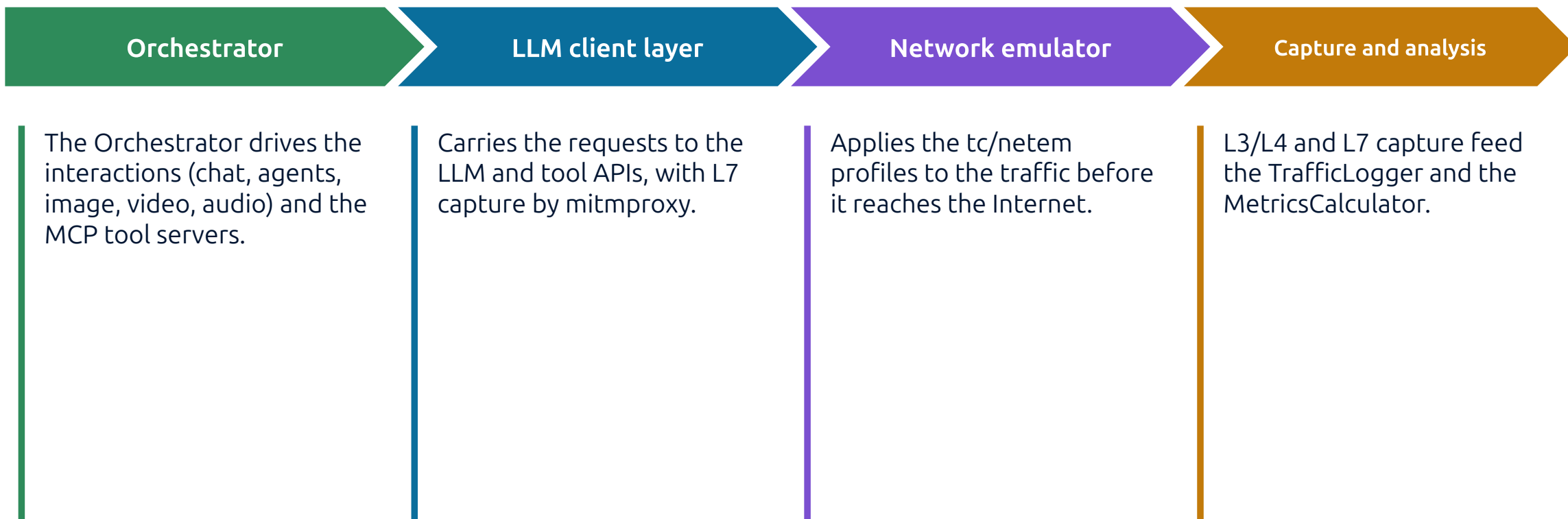
The five initial findings of the 6G media study, measured with the 6G AI Traffic Characterization testbed



The findings are initial, from a draft report, and are to be updated as more measurement results become available.

# The testbed

How the 6G AI Traffic Characterization testbed runs an interaction and measures its traffic



# What it measures

Eleven interaction patterns, run over emulated network profiles, reported in four metric categories

**Interaction patterns** from chat to agent-to-agent collaboration

Chat

Agent with MCP

Image generation

Multimodal analysis

Multimodal analysis, live AI mode

Video understanding

Real-time text and audio

Direct web search

Computer use

Personal assistant agent

Agent-to-agent collaboration

**Network profiles** deployment conditions, plus a lossy profile that finds where an interaction breaks

ideal

6g\_itu\_hrllc

5g\_urban

wifi\_good

cell\_edge

satellite\_leo

satellite\_geo

congested

5qi\_7

5qi\_80

lossy

**Metrics** recorded per request and from packet captures

A. Traffic characteristics

B. Response time and errors

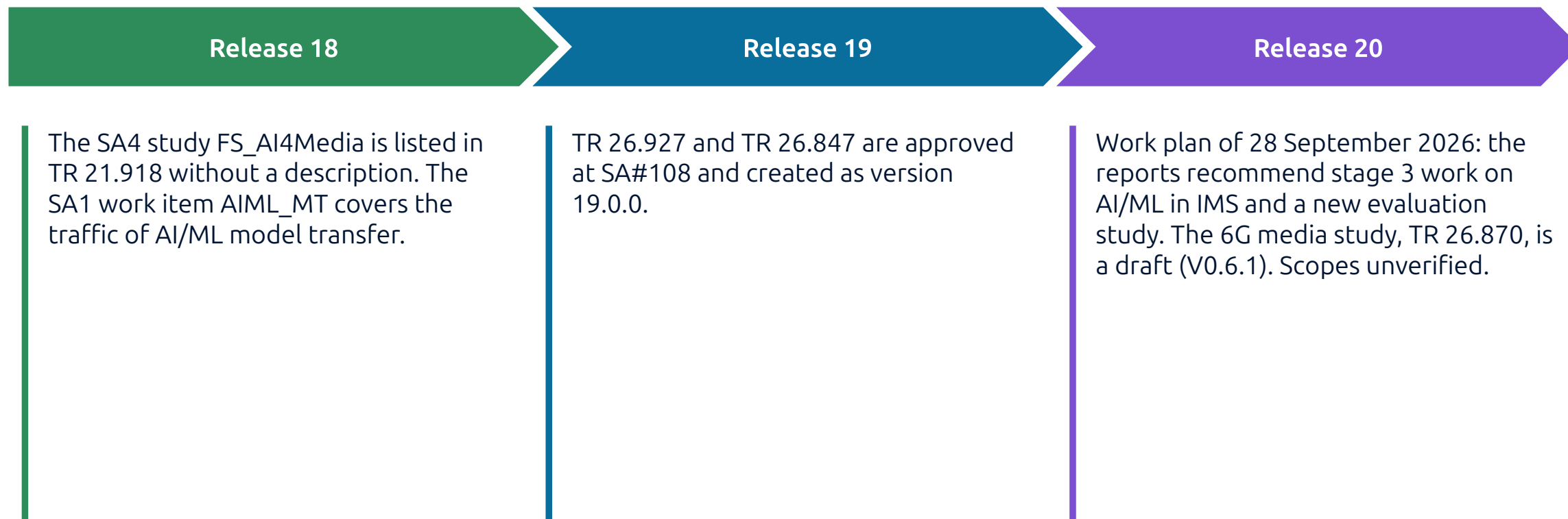
C. Service metrics

D. Task-related QoE

A test run takes one interaction pattern, one network profile and one execution mode, and produces a metric record.

# How it grew

What each 3GPP release added to AI and ML in media services



From the Standards pages of the website; the Release 20 items come from the 3GPP work plan, with no Release 20 release description (TR 21.920) available.

IMPLEMENT

# Repositories

The repositories of the AI traffic and AI/ML evaluation work, from their READMEs

| REPOSITORY                    | WHAT IT IS                                                                                       | COVERS                                                                 | LATEST RELEASE                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------|
| 6G-Testbed                    | the 6G AI Traffic Characterization testbed: measures AI service traffic under network conditions | AI traffic testbed<br>Network emulation                                | <div><div></div> none yet</div> <div>GitHub</div> |
| netemu-dashboard              | a web UI and REST API for network impairment profiles                                            | Network emulator control                                               | <div><div></div> none yet</div> <div>GitHub</div> |
| rt-ai-ml-evaluation-framework | the AI and ML evaluation framework of the 3GPP SA4 report on AI and ML in 5G media services      | Compressed model transfer<br>Split inferencing<br>Translation scenario | <div><div></div> none yet</div> <div>GitHub</div> |

FIND OUT MORE

Technical Analysis

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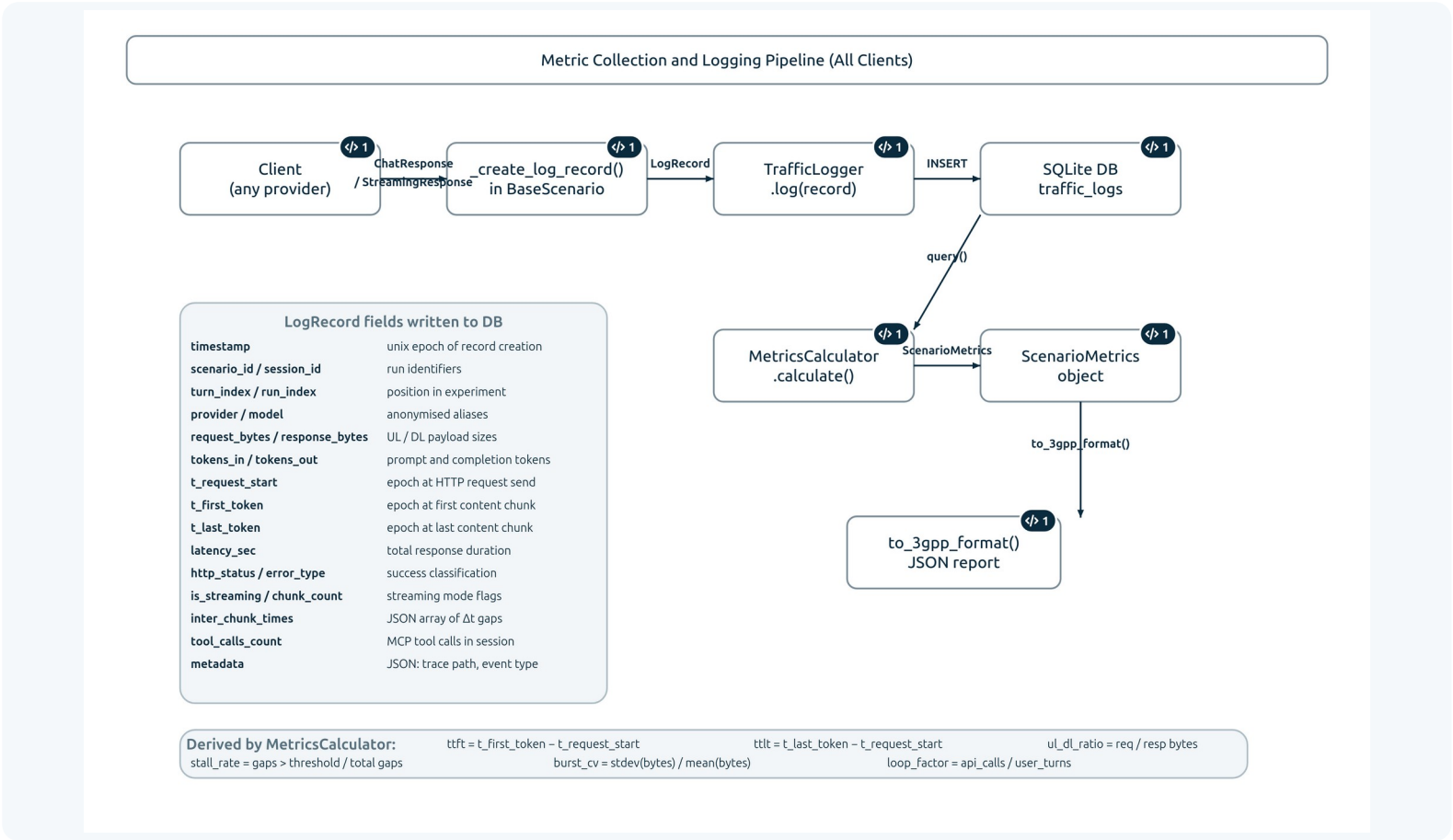
released

no release yet

IMPLEMENT

# Repositories in the architecture

The Reference Tools on the specification figure, as the figure generator draws them



PROVIDED BY THE REFERENCE TOOLS

1 6G-Testbed

All seven pipeline boxes are in the 6G-Testbed repository (aitestbed).

# Latest updates and roadmap

Status on 23 October 2026

## UNDER STUDY

### ● Metrics

A careful review and detailed definition of the metrics, and of how the traffic characteristics are measured.

## IN DEVELOPMENT

### ● AI traffic testbed

Agentic measurements for the 6G media study, and video analysis and chat traffic with tokens.

### ● Network emulator

Network capture and measurement as a standalone package, which the testbed uses for shaping and pcap analysis.

### ● AI and ML evaluation framework

Split inferencing and compressed model transfer, including incremental transfer of model data.



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